UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,496	12/12/2003	Johan Rune	P18097-US2	1627

27045 7590 07/19/2007

ERICSSON INC.
6300 LEGACY DRIVE
M/S EVR 1-C-11
PLANO, TX 75024

EXAMINER	
ELPENORD, CANDAL	
ART UNIT	**PAPER NUMBER**
2609	

MAIL DATE	DELIVERY MODE
07/19/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/734,496	RUNE ET AL.	
	Examiner	Art Unit	
	Candal Elpenord	2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,5-8,14-24 and 30-32* is/are rejected.

7)☒ Claim(s) *9-13 and 25-29* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 March 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *See Continuation Sheet*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :18 October 2004 and 03 May 2004.

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Abstract Objection

2. The abstract of the disclosure is objected to because the terms "are disclosed" recited in line 1. Correction is required. See MPEP § 608.01(b).

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. **Claims 1-16** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, the occurrence of the term "said shared medium network" recited in line 4 and 9 has no antecedent basis. Similar problems exist in **claim 6** line 3-4, **claim 8** line 3-4, **and claim 16** line 3.

Claims 2-5, 7 and 9-15 are rejected since they depend on claims 1 and 6.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. **Claim 1-4, 6-7-8, 14,17-20, 22-24 and 30** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Sorensen et al.** (**US 7,016,336 B2**) in view of **Warwick et al.** (**US 7,099,348 B1**).

As per claim 1, **Sorensen et al.** discloses a method preventing broadcast loops (**see column 9 line 21-25**) in a point-to-point network, the point-to-point network having a plurality of nodes including at least one network access point (**see abstract line 12-15**), comprising: (a) connecting the point-to-point network to the shared medium network via the network access point (**see abstract line 12-15**); (b) defining a plurality of broadcast types for data packets used in the point-to-point network (**see column 8 line 45-49**);

As per claim 14, Sorensen et al. discloses a method wherein the step of preventing broadcast loops includes storing in a node of the point-to-point network a unique identification for each broadcast type data packet received by the node, and determining for each broadcast type data packet received by the node whether the data packet was previously processed by the node based on the stored unique identification (**see column 5 line 28-34**). However, **Sorensen et al.** fails to disclose a method of changing a broadcast type of certain ones of the data packets when the data packets

cross a network access point service area (NAPSA) or are forwarded from the point-to-point network to the shared medium network as recited in **claim 1**, a method wherein the broadcast type covering a single point-to-point network, a second broadcast type covering a single point-to-point network, a third broadcast type covering a single administrative domain, and a fourth broadcast type covering a single point-to-point network and a single administrative domain as recited in **claim 2**, a method wherein the broadcast types are indicated in a header of the data packets as recited in **claim 3**, the method wherein the fourth broadcast type is assigned to data packets that are carrying a route request as recited in **claim 4**, the method wherein a data packet assigned the fourth broadcast type may be forwarded from the point-to-point network to the shared medium by any network access point that is in an administrative domain that includes a source of the data packets as recited in **claim 6**, the method wherein the step of changing comprises changing a broadcast type of the data packet from the fourth broadcast type to the second broadcast type when the data packet crosses a NAPSA border as recited in **claim 7** and a method wherein the step of changing comprises changing a broadcast type of the data packet from the fourth broadcast type to the third broadcast type when the data packet is forwarded to the shared medium network as recited in **claim 8**. **Warwick et al**. from a similar field of endeavor discloses a method of changing a broadcast type of certain ones of the data packets when the data packets cross a network access point service area (NAPSA) (**see column 5 line 45-51**) or are forwarded from the point-to-point network to the shared medium network, a method wherein the broadcast type covering a single point-to-point network, a second broadcast

type covering a single point-to-point network, a third broadcast type covering a single administrative domain, and a fourth broadcast type covering a single point-to-point network and a single administrative domain (**see column4 line 50-57**), a method wherein the broadcast types are indicated in a header of the data packets (**see column 4 line 64-67**), discloses a method wherein a data packet assigned the fourth broadcast type may be forwarded from the point-point network to the shared medium network by any network access point that is an administrative domain that includes a source of the data packet (**see column 3 line 35-40**), a method wherein the step of changing comprises changing a broadcast type of the data packet from the fourth broadcast type to the second broadcast type when the data packet crosses a NAPSA border (**see column 6 line 8-14**) and a method wherein the step of changing comprises changing a broadcast type of the data packet from the fourth broadcast type to the third broadcast type when the data packet is forwarded to the shared medium network (**see column 3 line 52-58**). Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the broadcast system with local information as taught by **Warwick et al**. into the administrative domains networks of Sorensen et al. so that broadcast loops can be prevented when data packets traverse a different network geographical area. The broadcast system as taught by Warwick et al. can be implemented/modified to include the administrative domains networks of **Sorensen et al**. through network management and hardware implementation by assigning a unique broadcast identifier code to each broadcast type for filtering purposes at network access

points. The motivation being that it saves valuable bandwidth with respect to network load reduction.

Claims 17-20, 22-24 and 30 are rejected for the reasons as claims 1-4, 6-7-8 and 14 since they are the corresponding system claims of the method claims.

10. **Claim 5 and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Sorensen et al**. in view of **Warwick et al**. in further view of background of **Rune et al**. (**US 2001/0005368 A1**).

As per claim 5, both Sorensen et al. and Warwick et al. fail to teach a method wherein if the route request is an ARP request, then data packets are limited to a single administrative domain. However, Rune et al. in his background discloses a method wherein if the route request is an ARP request (**see background paragraph 0022 line 4-8**), then data packets are limited to a single administrative domain. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the ARP request technique disclosed in background of Rune et al. into the methods of both **Sorensen et al**. and **Warwick et al**. to do fast process at network access point via an administrative domain. The ARP request method as disclosed in background of **Rune et al**. can be modified/implemented to include the methods of both **Sorensen et al**. and **Warwick et al**. through software manipulation and other techniques by an administrative domain at each node. The motivation being that it provides fast processing of destination request.

Claim 21 is rejected for the same reason as claim 5 since it is the corresponding system claim of the method claim.

11. **Claims 15-16 and 31-32** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Sorensen et al.** (**US 7,016,336 B2**) in view of **Warwick et al.** (**US 7,099,348 B1**) in further view of **Van Valkenburg et al.** (**US 6,775, 258 B1**).

For claim 15-16, Sorensen et al. and Warwick et al. fail to teach a method wherein the unique identification includes a sequence number generated by a source node of the data packet, an address of the source node, and a broadcast type of the data packet as recited in **claim 15** and a method wherein the step of preventing broadcast loops further includes generating a new sequence number for the data packet if the data packet was transferred across the shared medium network without encapsulation and keeping the sequence number generated by the source node otherwise as recited in **claim 16**. However, **Van Valkenburg et al.** in a similar field of endeavor discloses a method wherein the unique identification includes a sequence number (**see Fig. 4 box 66**) generated by a source node of the data packet, an address of the source node (**see column 3 line 28-33**), and a broadcast type of the data packet (**see column 5 line 61-62**) and a method wherein the step of preventing broadcast loops further includes generating a new sequence number (**see Fig. box 72 and column 7 line 65-69**) for the data packet if the data packet was transferred across the shared medium network without encapsulation and keeping the sequence number generated by the source node otherwise. The network apparatus/method for routing packet data in ad-hoc and wireless system as taught by **Van Valkenburg et al.** can be

incorporated into the broadcast system with local information of **Warwick et al.** and administrative domains networks of **Sorensen et al.** so that each source node can sequentially number the broadcast messages that are created within it in order to prevent broadcast loops. The routing method of data packet in an ad-hoc and wireless network as taught by **Van Valkenburg et al.** can be modified/implemented to include the methods of both **Sorensen et al.** and **Warwick et al.** through software manipulation by an administrative domain at each node. The motivation being that it provides a technique for keeping track of each respective data packet at the network access point.

Claims 31-32 are rejected for the same reasons as claims 15-16 since they are the corresponding system claims of the method claims.

Allowable Subject Matter

12. **Claims 9-13 and 25-29** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Larsson et al. (US 6,704, 293 B1) is cited to show method and system that is pertinent to the claimed invention.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Candal Elpenord whose telephone number is (571) 270-

3123. The examiner can normally be reached on Monday through Friday 7:30AM to 5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dang Ton can be reached on (571) 272-3171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CE

Ton

DANG T. TON
SUPERVISORY PATENT EXAMINER